## Remarks

After entry of this Amendment, claims 1-29 will be pending. Applicant requests reconsideration in view of the amendments and the following remarks.

### Request for Information

On page 2 of the action, the examiner requests certain information regarding the Power Point presentation entitled "Limitations of Integrating Impulse Noise When Using Dosimeters" and presented at the American Industrial Hygiene Conference in June 2002. In rely, Applicant provides the following information:

- Copies of the Power Point were not available to all attendees, although a limited number of copies were made (about 3-5 copies) and given to certain attendees;
- The Power Point was not available for "order" at or after the conference, although it is believed that it was available on the Internet as of August 2, 2002;
- The American Industrial Hygiene Conference is usually attended by industrial hygienists and safety professionals, but can be attended by anyone who registers and pays the registration fee;
- Prior to this conference, an abstract was published in the conference proceedings in March/April 2002. The abstract was cited on the Information Disclosure Statement filed April 4, 2007.

### Rejection under 35 U.S.C. § 112

Claims 6-7 and 16-18 were rejected under 35 U.S.C. § 112, second paragraph as allegedly being indefinite. As requested by the examiner, claims 6-7 and 16-17 have been amended to include definitions for the variables in the equations recited in these claims. The amendments do not narrow the scope of these claims. Because claim 18 does not recite any equations, no amendments to this claim should be required. Applicant also notes that claim 8, like claim 18, recites the parameters "A-duration, B-duration, C-duration, or D-duration" and was not rejected as being indefinite. Further, these parameters are defined in the specification at page 7, line 24 through page 8, line 7. Thus, the limitations of claim 18 (as well as claim 8) are sufficiently definite when read in light of the specification. For the foregoing reasons, the rejection of claims 6-7 and 16-18 should be withdrawn.

**Rejections under 35 U.S.C. § 102(f)/(g)**

Claims 1-20 were rejected under 35 U.S.C. § 102(f) and (g) over the article entitled "Noise Dosimeter for Monitoring Exposure to Impulse Noise."

Claims 1-3, 8-9, 12-13, and 19-20 were rejected under 35 U.S.C. § 102(f) and (g) over the article entitled "New System for Monitoring Exposure to Impulse Noise."

Claims 1-4, 6, 8-9, 12-14, 16, and 18-20 were rejected under 35 U.S.C. § 102(f) and (g) over the PowerPoint presentation entitled "Limitations of Integrating Impulse Noise When Using Dosimeters."

Applicant hereby submits the attached Declaration under 37 C.F.R. § 1.132 stating that the co-authors of these articles did not invent the subject matter claimed in the instant application and further that the co-authors were merely working under Applicant's direction in performing the work described in the articles.

Accordingly, the rejections under 35 U.S.C. § 102(f) and (g) should be withdrawn.

**Rejection under 35 U.S.C. § 102(b)**

Claims 1-4, 6, 8-9, 12-14, 16, and 18-20 were rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Power Point presentation entitled "Limitations of Integrating Impulse Noise When Using Dosimeters" by Kardous et *al.* (hereinafter "Kardous"). Applicant traverses this rejection and requests that it be withdrawn.

**Independent Claim 1**

Independent claim 1, as amended, recites a system for monitoring exposure to impulse noise, comprising:

> a sound-sensing device operable to sense impulse noise;
> a storage module operable to store the waveform of the impulse noise sensed by the sound-sensing device;
> a processor operable to calculate plural noise parameters of the impulse noise from the waveform; and
> a user interface program operable to allow a user to select one or more of said plural noise parameters and display said selected one or more noise parameters.

Kardous discusses limitations of conventional dosimeters, methods for measuring impulse noises, and various noise parameters that can be obtained from impulse noises. However, Kardous does not fully disclose an actual system that can be used by a user to select

various noise parameters for display in order to asses the risk caused by exposure to impulse noise. At most, Kardous discloses graphs of different noise parameters, but it does not teach or suggest a user interface program operable to allow a user to select one or more noise parameters and display the selected noise parameters, as required in claim 1. FIGS. 7 and 8 of the present application show two embodiments of a user-interface software program that can be used for displaying and analyzing noise parameters. As shown, a user can simultaneously display multiple noise parameters that characterize the recorded wave form and allow the user to assess the risk of exposure based on the various noise parameters. Kardous does not teach or suggest such a system.

Accordingly, claim 1 is not anticipated by Kardous, and therefore should be allowed.

**Independent Claim 12**

Independent claim 12, as amended, recites a method for monitoring exposure to impulse noise, comprising:

> detecting impulse noise;
> recording an acoustic waveform of the detected impulse noise;
> calculating plural noise parameters of the detected impulse noise from the recorded waveform; and
> selecting, via one or more user-interface elements, one or more of the plural noise parameters;
> displaying the selected noise parameters; and
> assessing the potential hazard of the impulse noise through analysis of the selected noise parameters.

Kardous discusses limitations of conventional dosimeters, methods for measuring impulse noises, and various noise parameters that can be obtained from impulse noises. Kardous also discloses graphs of different noise parameters, but it does not teach or suggest selecting one or more noise parameters using one or more user-interface elements, displaying the selected noise parameters, and assessing the potential hazard of the impulse noise through analysis of the selected noise parameters.

Accordingly, claim 12 is not anticipated by Kardous, and therefore should be allowed.

Dependent claims 2-4, 6, 8-9, 13-14, 16, and 18-20 are patentable for the reasons given above in support of their respective base claims and because each dependent claim recites an independently patentable combination of features.

**Rejection of Claims 1-3, 9-13, and 19-20**

Claims 1-3, 9-13, and 19-20 were rejected under 35 U.S.C. § 103(a) as allegedly being obvious from U.S. Patent No. 6,567,524 to Svean et al. (Svean) in view of U.S. Patent Publication No. 2003/0191609 to Bernardi et al. (Bernardi). Applicant traverses this rejection and requests that it be withdrawn.

**Independent Claim 1**

The system of claim 1 comprises a processor that calculates plural noise parameters that characterize an impulse noise and allows a user to select one or more of those noise parameters in order to better assess one's risk of possible hearing damage from exposure to the impulse noise. Neither Svean nor Bernardi teaches or suggests the instantly claimed system.

Svean's device purportedly can be used as a personal noise exposure dose meter that can detect and analyze impulsive noise. At most, Svean's device purportedly calculates a "peak" value of an impulse noise using a C-weighting scale for assessing the noise. For assessing stationary or semistationary noise dose, Svean calculates nose dose using an A-weighting scale. Svean, col. 11, lines 39-47. In other words, Svean allegedly calculates only a single noise parameter for impulse noise- peak value- and assesses the impulse noise based on peak value only. Svean does not contemplate the need to calculate multiple noise parameters of an impulse noise, as in the claimed system. Further, Svean merely provides a "go/no go" assessment for activating a warning signal if the peak value exceeds a predetermined limit.

Unlike the claimed system, Svean does not allow a user to select and view one or more of the calculated parameters so that the user can better assess the risk of exposure using the selected noise parameters. For example, when assessing impulse noise characterized by a high number of impulses separated by short intervals, one might apply greater weight to the total number of impulses and temporal spacing between the impulses. Svean does not have this capability. Because Svean only calculates one noise parameter and provides a "go/no go" assessment based on that one value, there is no teaching or suggestion in Svean for employing a user interface that would allow a user to select from various noise parameters of impulsive noise.

Accordingly, for at least the foregoing reasons, claim 1 is not rendered obvious by Svean and Bernardi, and therefore should be allowed.

**Independent Claim 12**

The method of claim 12 comprises, *inter alia*, calculating plural noise parameters of a detected impulse noise, selecting, via one or more user-interface elements, one or more noise parameters, and assessing the potential hazard of the impulse noise through analysis of selected noise parameters. Neither Svean nor Bernardi teaches or suggests the instantly claimed system.

At most, Svean's device purportedly calculates a "peak" value of an impulse noise using a C-weighting scale for assessing the noise. For assessing stationary or semistationary noise dose, Svean calculates nose dose using an A-weighting scale. Svean, col. 11, lines 39-47. Svean does not contemplate the need to calculate multiple noise parameters of an impulse noise, as required in claim 12. Further, Svean merely provides a "go/no go" assessment for activating a warning signal if the peak value exceeds a predetermined limit.

Unlike the claimed method, Svean does not allow a user to select and view one or more of the calculated parameters so that the user can better assess the risk of exposure using the selected noise parameters. Because Svean only calculates one noise parameter and provides a "go/no go" assessment based on that one value, there is no teaching or suggestion in Svean for employing a user interface that would allow a user to select from various noise parameters of impulsive noise.

Accordingly, for at least the foregoing reasons, claim 12 is not rendered obvious by Svean and Bernardi, and therefore should be allowed.

Dependent claims 2-3, 9-11, 13, and 19-20 are patentable for the reasons given above in support of their respective base claims and because each dependent claim recites an independently patentable combination of features.

**Rejection of Claims 4, 6, 8, 14, 16 and 18-19**

Claims 4, 6, 8, 14, 16 and 18-19 were rejected under 35 U.S.C. § 103(a) as allegedly being obvious from Svean in view of Bernardi and Kardous. Applicant traverses this rejection and requests that it be withdrawn.

Claims 4, 6, 8, 14, 16 and 18-19 depend from claims 1 or 12 and are patentable for the reasons given above in support of their respective base claims and because each dependent claim recites an independently patentable combination of features.

Dependent claim 4, for example, recites "wherein the sound-sensing device is operable to sense impulse noise levels having a peak pressure level greater than 146 dB." Similarly, dependent claim 14 recites "detecting impulse noise levels having a peak pressure level greater than 146 dB." In the rejection of claims 4 and 14, the action states that it would have been obvious to modify the device of Svean to detect impulse noise greater than 146dB as taught by Bernardi and Kardous. Applicant disagrees. Svean's device includes miniature microphones M1 and M2 that are embedded in an ear piece. Commercially available microphones that can detect impulse noise levels greater than 146 dB cannot fit inside an earpiece. Thus, Svean as presently understood would not, and could not, be modified to include a microphone that can detect impulse noise levels having a peak pressure level greater than 146 dB. Hence, no combination of Svean, Bernardi, or Kardous would yield the system of claim 4 or the method of claim 14.

**Conclusion**

The present application is in condition for allowance and such action is respectfully requested. If any further issues remain concerning this application, the Examiner is invited to call the undersigned to discuss such matters.

Respectfully submitted,

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